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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,419	12/08/2003	Scott K. Parrish	AQM.01	9778

25871 7590 02/04/2008
SWANSON & BRATSCHEUN, L.L.C.
8210 SOUTHPARK TERRACE
LITTLETON, CO 80120

EXAMINER

PAK, JOHN D

ART UNIT	PAPER NUMBER
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1616

MAIL DATE	DELIVERY MODE
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02/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/728,419	Applicant(s) PARRISH, SCOTT K.	
	Examiner JOHN PAK	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Claims 10-15 have been added. Claims 1-15 are now pending in this application.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2007 has been entered.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

(1) All claims now recite or read on the feature that the phosphonic compound is "co-formulated with" the acid "prior to direct application by spraying." This terminology is not found in the originally filed disclosure. So what does it mean in applicant's invention? Does it encompass "joint" formulation like in two separate tanks mixing two ingredients via a Y-tube for direct application? How exactly does it modify applicant's

invention? How much "prior" is prior — does one second prior to direct application meet the claimed feature? These questions and uncertainties lead to the determination that the newly claimed feature, as noted herein, was not reasonably conveyed; and therefore, the claims lack adequate descriptive support.

(2) New claims 10 and 11 recite "pH between 1 and 3." This feature is not found in any of the previously filed claims. Although the originally filed specification discloses "between pH 2 and pH 4" and "pH between 4 and 1," the newly claimed range was not specifically disclosed. Note, for a pH to be "between" 1 and 3, it cannot be 1 or 3. Newly claimed subject matter was not reasonably conveyed to one skilled in the art; and the claims lack adequate descriptive support from the originally filed disclosure.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This ground of rejection relates to the amendatory subject matter, "wherein said phosphonic compound(s) is co-formulated with said acid prior to direct application to said vegetation by spraying."

The amendatory subject matter is confusing. Independent claim 2 recites merely "the step of applying to the vegetation." This step does not require spraying. However, the amendatory subject matter implies direct spraying but does not positively require such spraying, and as a result there is internal inconsistency within the claim, which renders claim 2 and its dependent claims confusing.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 5, 8, 9 are rejected under 35 U.S.C. 102(b) as being anticipated by CN 1252940 (cited as HCAPLUS abstract 2000:843249 in the previous Office action). Full English translation¹ is provided herewith.

CN 1252940 discloses a plant growth regulating insecticide composition that contains 1-50% ethephon, 0.5-10% imidacloprid, dispersant, cosolvent, water, and 1-100% sulfuric or hydrochloric acid (see claim 1 for various specific growth regulating effects). Example 1 shows a composition that contains about 40 wt% ethephon + about

¹ The provided translation is a translation of the specification and claims. For some reason, the translation of the original document did not translate the abstract, attached hereto. As a result, applicant is being provided a copy of the front page of the original document, which contains the abstract. The underlined Chinese character (at second to last line) is translated as cotton. The previously cited HCAPLUS abstract 2000:843249 is a functional translation of this abstract, according to the USPTO Translation branch. The HCAPLUS abstract is already of record and it is so noted.

30 wt% sulfuric or hydrochloric acid. Equivalent volume percent of the acid cannot be exactly estimated without knowing the volume contribution of the other ingredients, but it would be accurate to state that the volume percent of the acid is likely higher than its weight percent since the total volume of the composition (less than 1002 ml) is clearly less than the total weight (1002 g), so the denominator would be smaller. Water-diluted solution for application is disclosed (translation page 10, below the table). Use on crops such as corn, fruit tree, cotton is disclosed (translation page 4, last paragraph; abstract).

The cited reference does not specifically state that the efficiency and efficacy of ethephon is increased by adding hydrochloric acid. However, because the same hydrochloric acid is combined with the same ethephon, and the combination is applied to the same crop plants the same effect would necessarily have been obtained. Further, it is noted that reducing apical dominance (claim 1 of CN 1252940) reads on applicant's growth inhibition (claim 5) and height stunting (claim 8), as claimed. The claims are thereby anticipated.

Applicant's argument of 10/19/2007 is noted, but the "co-formulated" feature is expressly disclosed in the full English translation, as discussed above. As for the feature that the co-formulating is done prior to direct application to the vegetation by spraying (with respect to method claims rejected here), it has been noted earlier in this Office action that direct application by spraying has not been positively required in any of the claims. For these reasons, the claims are rejected.

Art Unit: 1616

Claims 1-2, 4, 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by CN 1302545.

A full English translation is provided herewith and all page reference is to the translation. CN 1302545 explicitly discloses a composition that contains, inter alia, 5% ethephon² and 1% phosphoric acid (Example 1 on page 8). Broader range of ethephon and phosphoric acid is disclosed: 2.5-12.5% ethephon and 0.5-1% phosphoric acid (claim 1). Rubber tree yield promotion is disclosed (claim 1).

As noted earlier in this Office action, none of the claims actually require direct application to vegetation by spraying. It is further noted that with respect to composition claims, such feature does not have any distinguishing force since such process step does not change what is being claimed, i.e. a composition. A composition is not changed by how it is used after it is formulated. Also, since the same phosphoric acid is mixed with the same ethephon in the prior art, the same increased efficiency and efficacy effect would necessarily be obtained. The claims are thereby anticipated.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

² See page 4 of the translation, line 7. There, the compound "2-chloroethylphonic acid" is referred to as "Ethrel." Ethrel is a well known alternative term for ethephon. See The Agrochemicals Handbook, which is of record in this application.

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 6-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over CN 1252940 in view of The Agrochemicals Handbook, Farm Chemicals Handbook '98, Fritz et al. (US 3,879,188) and CABA abstract 80:49077.

Teachings of CN 1252940 are discussed above, and the discussion there is incorporated herein by reference to avoid repetition. It is again noted that the abstract of the Chinese document discloses cotton as a suitable plant for treatment. See original document abstract, which is provided with this Office action; for further evidence of this disclosure by the original Chinese document abstract, see the previous cited HCAPLUS abstract 2000:843249.

The Agrochemicals Handbook discloses ethephon as a compound that releases ethylene and interferes in the growth processes of plants (see "Mode of action"). Uses include regulation of phases of plant growth and development by application to various growth sites, wherein plants include coffee, cucumbers, tomatoes, citrus, peaches, etc. (see "Uses"). Ethephon is disclosed as stable in aqueous solutions having pH values less than 3.5; otherwise, decomposition occurs with the separation of ethylene (see "Stability"). Pages A179-A180/Oct 83.

The Farm Chemicals Handbook '98 discloses ethephon to be a widely used plant growth regulator (ethylene generator). Uses on crops such as cotton, apples, and many others are disclosed. Stability under pH 3 is taught. See page 164.

Fritz et al. disclose the various plant growth regulating properties of ethephon and other phosphonic compounds (see claims 1, 18, 52-62; see also the structural formulas in columns 1-2). Wide variety of plant growth regulating response is obtained with ethephon, including increase in yield of cotton (column 4, lines 37-44; Example 32 on columns 27-28), abscission/defoliation of cotton (column 5, line 43; Example 34 on column 28), inhibition of terminal growth (paragraph bridging columns 4-5). See columns 4-77 for all the various plant growth regulating activities and examples, including increasing fruiting (column 4, lines 7, 30-32, 36-43). Addition of an acid for stability is taught, "to ensure that the pH is not greater than five" (sentence bridging columns 9-10). Selection of acid can be "any material which will impart the desired pH value" (column 10, lines 3-4). 0.1 to 16 pounds per acre application rate is disclosed (column 9, lines 60-66).

CABA abstract 80:49077 discloses foliar spray of ethephon for boll opening and increasing the yield of cotton.

Even though the primary reference CN 1252940 does not explicitly disclose the various features of the instant claims, one having ordinary skill in the art would nonetheless have found such features and the claimed invention as a whole obvious for the reasons set forth below.

CN 1252940 does not explicitly disclose increasing cotton defoliation efficiency of ethephon. However, it is known from Fritz et al. that ethephon has cotton defoliation

activity. Hence, the lower pH obtained with the use of the acid in CN 1252940 would at least have provided more of the active compound (due to higher stability) to provide increased efficiency.

CN 1252940 does not explicitly disclose increasing cotton boll opening efficiency. However, it is known from Fritz et al. that cotton yield is increased and fruiting of plants is increased with ethephon application. Since a boll is technically a fruit since it contains seeds, such teachings (increase in both yield and fruiting) would have fairly suggested cotton boll opening. Additionally, CABA abstract 80:49077 specifically teaches cotton boll opening with ethephon application. Further, and as stated above, the lower pH obtained with the use of the acid in CN 1252940 would at least have provided more of the active compound (due to higher stability) to provide increased efficiency.

The amount feature of claim 9, 2% volume to volume of the acid applied with a phosphonic acid compound, is noted but the Examiner maintains that such feature does not actually fix the amount of the acid since the volume depends on the concentration strength. Acids come in various strength or concentrations, so just describing the volume amount does not specify the actual acidic content. Notwithstanding the above comments, a 2% volume content of some concentration strength of the recited acids would have been obvious. The exact amount of the acid would have been readily adjusted by the ordinary skilled artisan, who would have been motivated to utilize a

quantity of acid sufficient to maintain the pH of the composition in the stable region, e.g. below pH 3.5 or 3 (Agrochemicals Handbook and Farm Chemicals Handbook '98).

CN 1252940 does not expressly disclose the combination of ethephon and an acid such as hydrochloric acid at a pH between 1 and 3. However, it is well known enough to be disclosed in industry handbooks that ethephon decomposes at a pH of about 3.5 and Fritz et al. disclose the desirability of keeping the pH of ethephon and other phosphonic plant growth regulating compounds below pH 5. The ordinary skilled artisan would thus have been motivated to formulate ethephon with an acid in order to keep the pH at the highly acidic range of below 3.5, including below 3.0. In doing so, one having ordinary skill in the art would have exercised routine experimentation or optimization to arrive at the claimed range since having a composition that is too extreme in acidity (e.g. below pH 1) would be expected to cause phytotoxicity problems.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

In this regard, applicant's specification data on page 6 has been given consideration. The data has been deemed insufficient.

First, the data is only with respect to cotton defoliation. The claims are far broader: they read on the entire spectrum of plant growth regulating activity. Nothing

about applicant's data establishes that the cotton defoliation result would be indicative or predictive of similar results for different plant growth regulating activity in different plants. Evidence of nonobviousness, if any, must be commensurate in scope with that of the claimed subject matter. In re Kulling, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); In re Lindner, 173 USPQ 356, 358 (CCPA 1972).

Second, it would have been expected that a 4% muriatic acid-containing ethephon composition would be more stable than a composition that did not contain the muriatic acid since ethephon decomposes at pH above 3.5. Less decomposed ethephon would contain more active ingredient to provide the activity for which ethephon is known; and therefore, applicant's data cannot be given probative weight. The data does not rebut the expectation that an acid-added ethephon would be more stable, less decomposed, and thus more active and efficient.

Applicant's specification evidence is thereby deemed insufficient and the claims must be rejected.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (US 3,879,188) in view of CABA abstract 80:49077, The Agrochemicals Handbook, The Farm Chemicals Handbook '98 and CN 1252940.

Fritz et al. disclose the various plant growth regulating properties of ethephon and other phosphonic compounds (see claims 1, 18, 52-62; see also the structural

formulas in columns 1-2). Wide variety of plant growth regulating response is obtained with ethephon, including increase in yield of cotton (column 4, lines 37-44; Example 32 on columns 27-28), abscission/defoliation of cotton (column 5, line 43; Example 34 on column 28), inhibition of terminal growth (paragraph bridging columns 4-5). See columns 4-77 for all the various plant growth regulating activities and examples, including increasing fruiting (column 4, lines 7, 30-32, 36-43). Addition of an acid for stability is taught, "to ensure that the pH is not greater than five" (sentence bridging columns 9-10). Selection of acid can be "any material which will impart the desired pH value" (column 10, lines 3-4). 0.1 to 16 pounds per acre application rate is disclosed (column 9, lines 60-66).

CABA abstract 80:49077 discloses foliar spray of ethephon for boll opening and increasing the yield of cotton.

The Agrochemicals Handbook discloses ethephon as a compound that releases ethylene and interferes in the growth processes of plants (see "Mode of action"). Uses include regulation of phases of plant growth and development by application to various growth sites, wherein plants include coffee, cucumbers, tomatoes, citrus, peaches, etc. (see "Uses"). Ethephon is disclosed as stable in aqueous solutions having pH values less than 3.5; otherwise, decomposition occurs with the separation of ethylene (see "Stability"). Pages A179-A180/Oct 83.

The Farm Chemicals Handbook '98 discloses ethephon to be a widely used plant growth regulator (ethylene generator). Uses on crops such as cotton, apples, and many others are disclosed. Stability under pH 3 is taught. See page 164.

CN 1252940 discloses a plant growth regulating insecticide composition that contains 1-50% ethephon, 0.5-10% imidacloprid, dispersant, cosolvent, water, and 1-100% sulfuric or hydrochloric acid (see claim 1 for various specific growth regulating effects). Example 1 shows a composition that contains about 40 wt% ethephon + about 30 wt% sulfuric or hydrochloric acid. Water-diluted solution for application is disclosed (translation page 10, below the table). Use on crops such as corn, fruit tree, cotton is disclosed (translation page 4, last paragraph; abstract).

The difference between the claimed invention and Fritz et al. is that Fritz et al. do not expressly disclose the combination of ethephon or other phosphonic plant growth regulating compounds and an acid such as hydrochloric acid or phosphoric acid. However, it is well known enough to be disclosed in industry handbooks that ethephon decomposes at a pH of about 3.5 and is stable at pH 3 or less — indeed, applicant acknowledges the same on page 8 of the 10/19/2007 response. The ordinary skilled artisan would thus have been motivated to co-formulate ethephon with an acid in order to keep the pH at the highly acidic range of below 3.5, 3 or less. Selection of a specific acid such as hydrochloric acid or phosphoric acid would have been obvious because these are common acidifying agents (see also Fritz et al., column 10, lines 3-4).

Instant claims recite increasing the efficiency and efficacy of a phosphonic compound in various plant growth regulating effect. All those plant growth regulating effect are known for ethephon and its structurally related phosphonic compounds from the teachings of Fritz et al. and the cited secondary references. Because the addition of an acid such as those recited by the claims would have been expected to provide stability and result in less decomposition, the mixture of ethephon or other phosphonic plant growth regulating compounds with said acid would have been expected to deliver increased efficiencies, as claimed.

As for the 2% volume to volume of the acid applied with phosphonic compounds (instant claim 9), the Examiner again maintains that such feature does not actually fix the amount of the acid since the volume depends on the concentration strength. Acids come in various strength or concentration forms, so just describing the volume amount does not specify the actual acidic content. Notwithstanding the above comments, a 2% volume content of some concentration strength of the recited acids would have been obvious. The exact amount of the acid would have been readily adjusted by the ordinary skilled artisan, who would have been motivated to utilize a quantity of acid sufficient to maintain the pH of the composition at or below 3.5.

Therefore, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because

every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited references.

In this regard, applicant's specification data on page 6 has been given consideration. The data has been deemed insufficient.

First, the data is only with respect to ethephon. Claims 2-9 read on "phosphonic compounds." Applicant has not established through objective evidence that data with ethephon is indicative or predictive of similar data with other phosphonic compounds, some of which possess substantial structural divergence (see Fritz et al., columns 1-2). Evidence of nonobviousness, if any, must be commensurate in scope with that of the claimed subject matter. In re Kulling, 14 USPQ2d 1056, 1058 (Fed. Cir. 1990); In re Lindner, 173 USPQ 356, 358 (CCPA 1972).

Second, the data is only with respect to cotton defoliation. The claims are far broader: they read on the entire spectrum of plant growth regulating activity. Nothing about applicant's data establishes that the cotton defoliation result would be indicative or predictive of similar results for different plant growth regulating activity in different plants. Kulling, 14 USPQ2d at 1058; Lindner, 173 USPQ at 358.

Third, and perhaps most important, it would have been expected that a 4% muriatic acid-containing ethephon composition would be more stable than a composition that did not contain the muriatic acid since ethephon decomposes at pH above 3.5. Less decomposed ethephon would contain more active ingredient to provide

the activity for which ethephon is known; and therefore, applicant's data cannot be given probative weight. The data does not rebut the expectation that an acid-added ethephon would be more stable, less decomposed, and thus more active.

Applicant's specification evidence is thereby deemed insufficient.

Applicant argues in the remarks filed on 10/19/2007 that the claimed "co-formulated" feature is not disclosed or suggested. The Examiner maintains that the known instability of ethephon at pH 3.5 would itself have suggested addition of an acid to an aqueous formulation. CN 1252940 teaches the suitability of acids such as hydrochloric acid and sulfuric acid for direct co-formulation. From such teachings, taken with those of Fritz et al., the ordinary skilled person in the art would have found phosphoric acid, another well known inorganic acidifying agent, an obvious modification and obvious suitable alternative.

Applicant also cites US 2007/0037707 as evidence that one acidic adjuvant, LI-700 (contains propionic acid and surfactants), cannot be reliably co-formulated with ethephon. Another acidic additive, citric acid + phosphoric acid, is a tank mix additive for ethephon, as applicant acknowledges and US 2007/0037707 discloses.

However, it is not clear whether this information was known to the ordinary skilled artisan at the time the invention was made. Applicant disclosed something different in his own specification, which is contradictory (specification page 2; emphases added):

Detailed Description of the Invention The phosphonic acids, phosphonic acid derivatives, and their salts (hereinafter collectively referred to as "phosphonic compounds"). Phosphonic compounds such as ethephon ($\text{ClCH}_2\text{CH}_2\text{PO}_3\text{H}_2$ or any phosphonic acid derivatives that will break down into ethylene in or on a plant when applied to the foliage of a target plant. These effects are increased and the speed of development is faster when the phosphonic compound is formulated in any acid that will buffer the application solution (water carrier) to a pH between 4 and 1. The spray solution should be applied in agricultural or horticultural application to the foliage of the target plant.

Thus, this is a most unusual situation in which applicant is using post-filing evidence to show that applicant's own teachings may be incorrect. Applicant may wish to clarify his position.

Regardless of such considerations, the Examiner's position is that LI-700 may contain additives such as specific surfactants or other ingredients that may not be suitable for ethephon. Just because one acidic adjuvant that contains a mixture of many different ingredients does not co-formulate reliably with ethephon does not mean that other acids are taught away or not obvious. The failure to co-formulate reliably could be due to ingredients other than propionic acid. Based on the prior art record established herein, including direct mixing of same or similar inorganic acids as taught by CN 1252940, applicant's arguments are not found persuasive.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Johann Richter, can be reached on **(571)272-0646**.

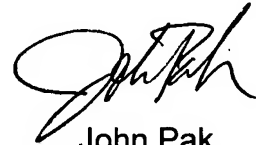
The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

Application/Control Number: 10/728,419
Art Unit: 1616

Page 19

A handwritten signature in black ink, appearing to read 'John Pak', with a stylized, cursive script.

John Pak
Primary Examiner
Technology Center 1600